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Elumenati OmniFocus 200 Series

Installation and Operation Guide

Last updated: **November 2012**

This document applies to the OmniFocus 3020 and 30210 sold after January 2013. For all previous 200 Series products please refer to the "OmniFocus 200 Series pre2013" manual.

For brevity, we refer to the 200 Series throughout. Differences are noted where applicable.

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200 Series Overview

Introduction

This guide covers the installation and operation of the 200 Series projection system, as well as an overview of operation. Please read through this entire guide before following the instructions. This will familiarize you with the process of setup for the 200 Series Projection System. The 200 Series is a variation of the 200 Series using the same lens but with a different projector and mounting system.

Equipment List

1. Canon WUX4000 projector with Elumenati lens mount attached and aligned
2. OmniFocus 200 Series lens (straight or folded version)
3. Video and power cables, remote w/ batteries, projector manual, and quick start guide
4. 200 Series stand (optional)

(Fig. 1) Case has two layers: Stand (top) and Projection System (bottom)

(Fig. 2) Assembled 30200 on stand

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200 Series Setup

The 200 Series is shipped with the adjustable lens mount already installed and aligned to the default setting (truncated or fulldome). The lens is removed from the mount and housed separately inside the case. The following describes the setup procedure.

Projector Connection

Before attaching the Elumenati lens, set up and/or install the projector and connect the projector to the video source. Please refer to the WUX4000 manual for details on projector operation.

1. Connect either the DVI or HDMI cable from the computer to the projector (Fig. 3). Connect power cable. Turn on the projector and aim at any flat surface more than three (3) feet away.

2. Turn on your computer.

3. Press the "input" button on the remote control or the projector control panel and choose "Digital PC" input signal.

- You may need to adjust the focus and/or zoom at first in order to read the image. On the control panel cycle through Focus, Zoom and Shift by repeatedly pressing the Lens button.
- Note that the arrow keys used for adjustment are slow to respond. Press and hold for one second before expecting to see changes.

(Fig. 3) Control Panel of the WUX4000

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4. The graphics card of your computer should detect the projector. Adjust desktop settings to enable the second monitor (extended displays mode). Default resolution is 1920 x 1200. It may be helpful to use either the truncated or fulldome Elumenati alignment image as your desktop background. Again use desktop settings to change your background making certain that the image is displayed 1:1 and not stretched or tiled.

5. Once you have a proper signal from the projector, you are ready to proceed to lens installation. You may turn off the projector at this point if you wish, though it is not necessary.

Lens Installation

1. If you have purchased a 200 Series stand, please assemble it according to the directions located at the end of this manual. If you are not using the stand, place the projector on a flat, sturdy surface to allow mounting of the lens.

2. The lens is secured using a magnetic bayonet mount.

- Remove the small lens cap on the projector side of the lens.
- Insert the lens into the mount and rotate until the magnets engage (Fig. 4).
- If using the folded lens (30210) ensure that the pins on the lens align with the grooves in the mount (Fig. 5).

(Fig. 4) Magnetic mount

(Fig. 5) Note groove for folded lense at top of mount

3. You are now ready for first light.

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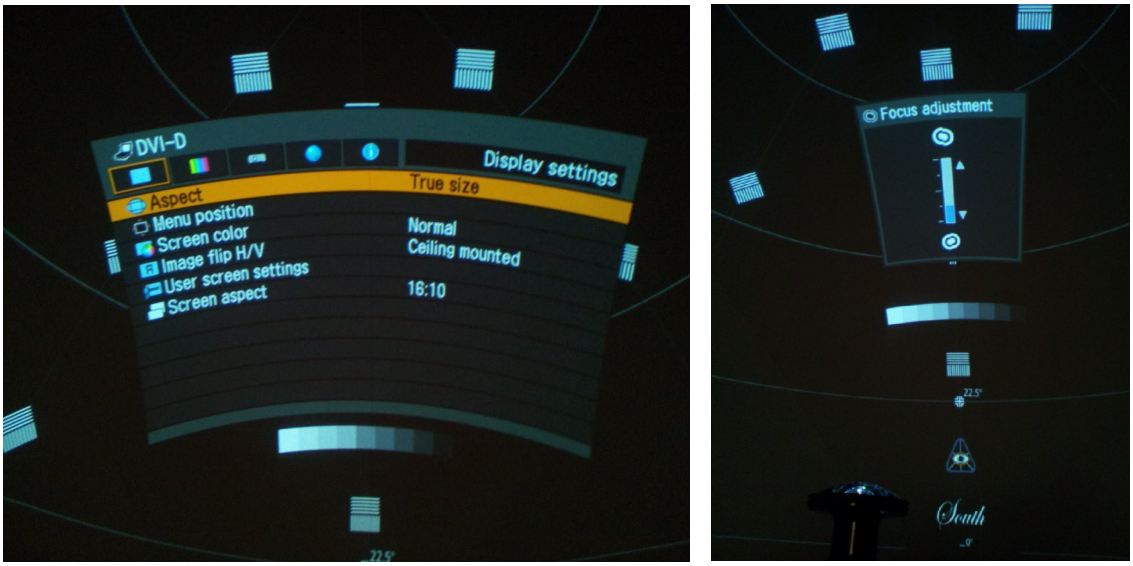
First Light

1. Turn on projector.
2. Remove the large lens cap by pulling it off. **Do not attempt to unscrew the lens cap.**
   - Take care not to scratch the fisheye element/lens while removing and replacing cap.
3. You should see the projector startup screen.
4. Adjust focus using either the projector control panel or remote control. (Fig. 3 above)
   - Focus to "good enough". Final focus is done after setup is complete.
   - For *fine* Focus and Zoom adjustments use the left and right arrow keys.

Projector Settings Adjustment

With the 200 Series, the stock lens not only has Focus and Zoom adjustment but also Lens Shift. This added capability allows optimization of the projected image. The system is already delivered in a nearly optimal state so any adjustments to be made will be minor.

1. Use the projector remote control or control panel to make any needed adjustments. The following images show the projector nominal Display and Focus settings for truncated (180°x112°) projection mode as well as the nominal Zoom and Lens Shift settings.



(Fig. 6) Nominal Display and Focus settings for truncated projection.

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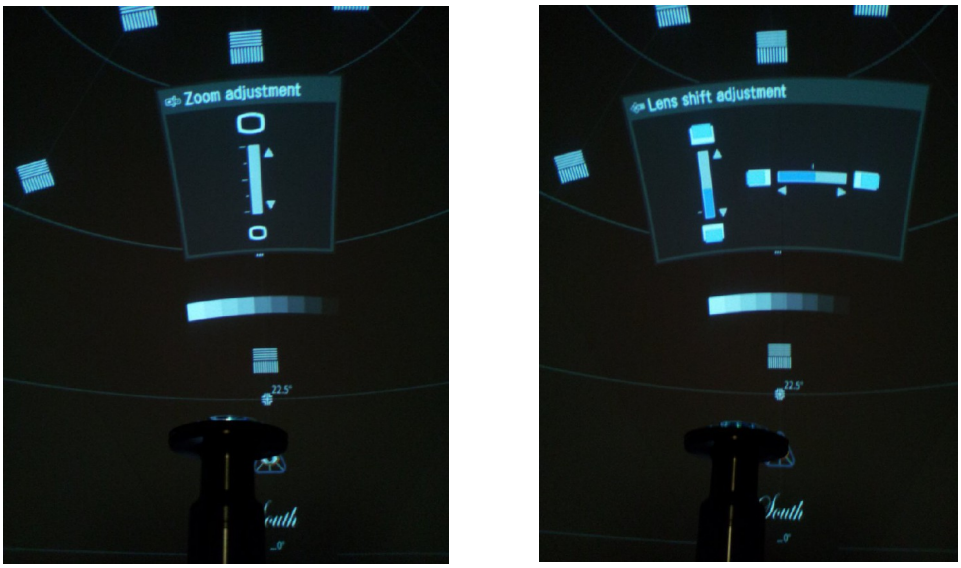
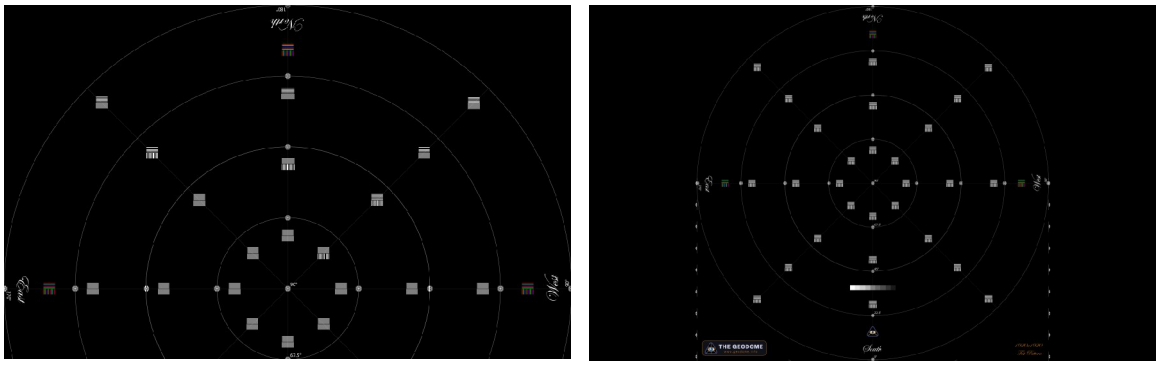


(Fig. 7) Nominal Zoom and Lens Shift settings for truncated projection.

2. Zoom and Lens Shift are interdependent, they must be adjusted together. It is best to use the Elumenati supplied alignment pattern described above during these adjustments.

- For Truncated projection
  - Adjust Zoom to its narrowest setting (Fig. 7).
  - Then adjust the physical height of the projector so that the outer circle of the alignment pattern (Fig. 8) runs the extent of and is parrallel to the screen edge.



(Fig. 8) Truncated (left) and Fulldome alignment patterns. Outer circle aligns with dome edge (springline) and center cross projects through the lens optical axis.

- For Fulldome projection
  - Adjust Zoom to the desired setting. The fulldome projection angle is continuously variable from 112° to 165°.
  - Adjust vertical Lens Shift so that the cross at the center of the concentric circles is projected directly out of the optical axis.
  - Then adjust the physical height of the projector so that the outer circle of the alignment pattern (Fig. 8) runs the extent of and is parrallel to the screen edge.
- Use Lens Shift to make final minor adjustments to the alignment.

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Stand Assembly (Optional)

The stand is shipped collapsed flat.

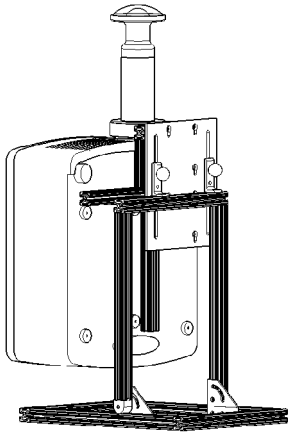
1. Loosen the tilt knobs and raise the vertical section to 90°. Tighten the knobs.

2. Loosen the 6 bolts that join the vertical section to the base (3 on either side) and slide the vertical section in about 1/3 of the base length. Tighten the bolts. Your stand should resemble the image in Fig. 9.

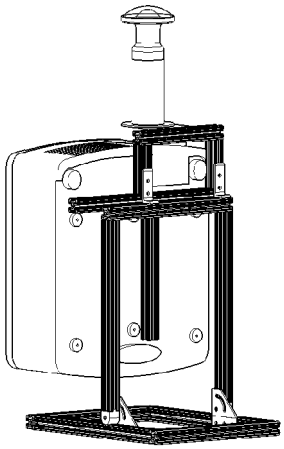
3. The extruded aluminum framing on the 200 Series project allows for multiple mounting options. 1/4”-20 bolts and t-nuts are provided for mounting using the 90° brackets as desired.

- Option 1: Use the mounting plate and carriage bolt arrangement for maximum height adjustment (up to 9”).
- Option 2: With no mounting plate there is still about 3” of height adjustment.
- Option 3: The easiest to assemble but with a fixed height setting.

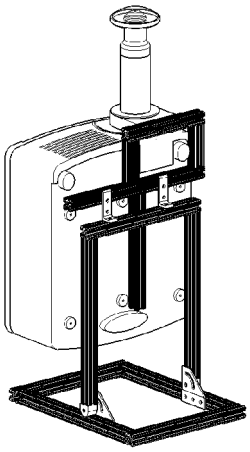
(Fig. 9) Fully Assembled Stand



(Option 1) 9” height adjustment



(Option 2) 3" height adjustment



(Option 3) Easiest mounting

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200 Series Information

This section contains product specifications, troubleshooting tips, and support information.

Maintenance

Lens Care

The bright light of the projector exaggerates the amount of dust on the lens surface. Dust has very little effect on picture quality and can be blown off or wiped away with a cloth. We recommend cleaning the lens ONLY if there are fingerprints or similar on the lens.

To clean:

1. Use a soft lint-free lens tissue or cotton cloth.
2. The Elumenati recommend PUROSOL™ Optical Cleaner from Edmund Optics; however, any high-quality camera optics cleaning fluid will work. **Do not use acetone-based solvents.**
   - **Tip:** In an emergency, Windex™ and a soft cotton t-shirt will work, but be careful!
3. Apply the cleaning fluid directly onto the tissue until moistened. Wipe gently until the lens is clean. To avoid scratching the lens, make sure that the tissue is always moist and do not scrub with excessive force.
4. When the lens is clean, finish with a light-pressure, single sweep across the surface of the lens using a drier portion of the tissue. Discard the tissue after every use.

Troubleshooting

Product Support

Please contact us with your questions via email at support@elumenati.com or phone at 1-888-384-3826, extension 2.

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200 Series Product Specifications

OMNIFOCUS PROJECTION

- Infinite depth of focus
- Optimized pixel placement
- Zoom adjustable from 180° x 112° to 165° fulldome projection

IMAGE

- 4000 ANSI lumens
- 88% brightness uniformity across the screen
- Contrast ratio: variable, 1000:1

DISPLAY TECHNOLOGY AND RESOLUTION

- 0.7” reflective LCD panels (LCoS) x 3
- 1920 x 1200 pixels
- Pixel fill factor >90%, significantly improving “screen door” effect over DLP

INPUT SIGNAL COMPATIBILITY

- Analog PC: VGA through WUXGA (1920 x 1200)
- Digital PC:
    - DVI through WUXGA (1920 x 1200)
    - HDMI through WUXGA (1920 x 1200)

INPUTS, CONTROL, & NETWORKING

- DVI-D (24 pin): Digital PC / Analog PC / Digital Video
- HDMI
- Mini D-Sub 15 pin: Analog PC / Component / SCART
- Stereo mini jack: Stereo audio input
- Wireless IR remote control and built-in keypad
- Mouse Control Receiver (USB)
- RS-232C Control Terminal
- Optional LAN Adaptor

DIMENSIONS

- Weight: 22.0 lbs / 10.0 kg
- Size: 680 mm L x 392 mm W x 184 mm H

LAMP

- 300W NSHA lamp
- Lamp life: 1500 hours (normal); 2000 hours (quiet)

POWER REQUIREMENTS

- Line voltage 100-240 VAC ± 10% @ 50/60 HZ
- Power consumption: 410W / 365W / 1.7W (normal / quiet / standby)

STANDARD ACCESSORIES

- Shipping case
- Line cord
- Wireless remote unit
- User manual
- Computer cable
- Omnimap Software API

OPTIONAL ACCESSORIES

- Projector stand
- Folded lens ccnfiguration

OPERATING ENVIRONMENT

- Operating temp: 41° to 95° F (5° to 35° C)
- Storage temp: -22° to 140° F (-30° to 60° C)
- Storage humidity: 5% - 90%
- Audible noise: 39/36dB (normal/quiet mode)

LIMITED WARRANTY

- 1 year parts and labor
- Lamp: 120 days or 500 hrs, whichever comes first

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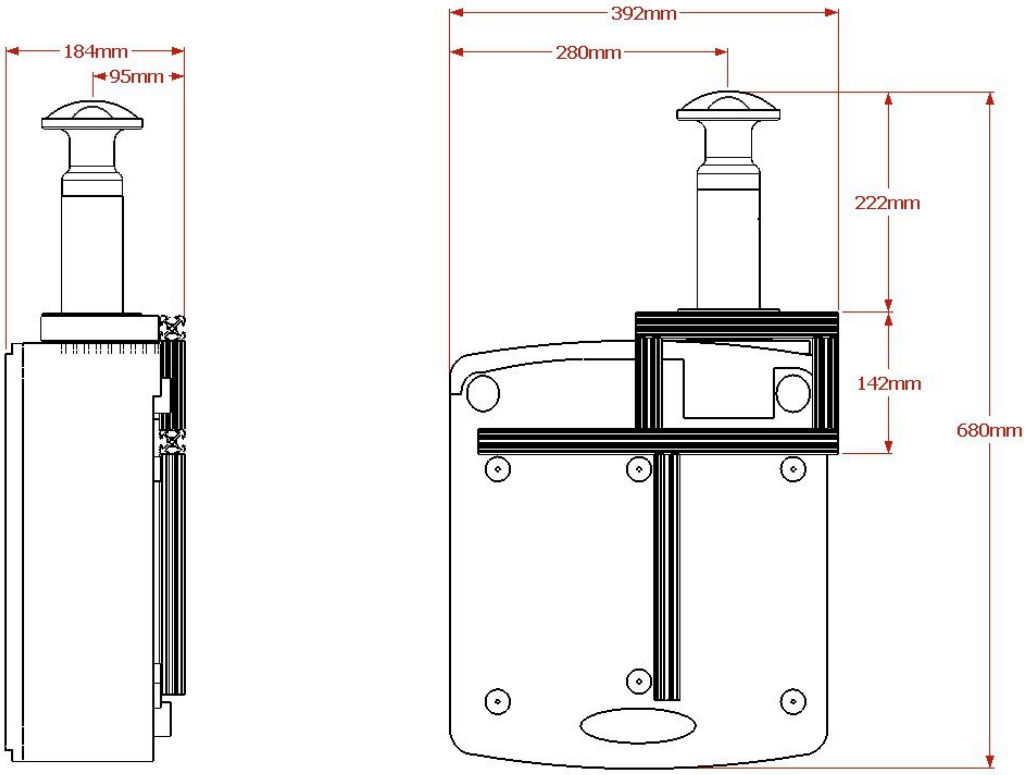
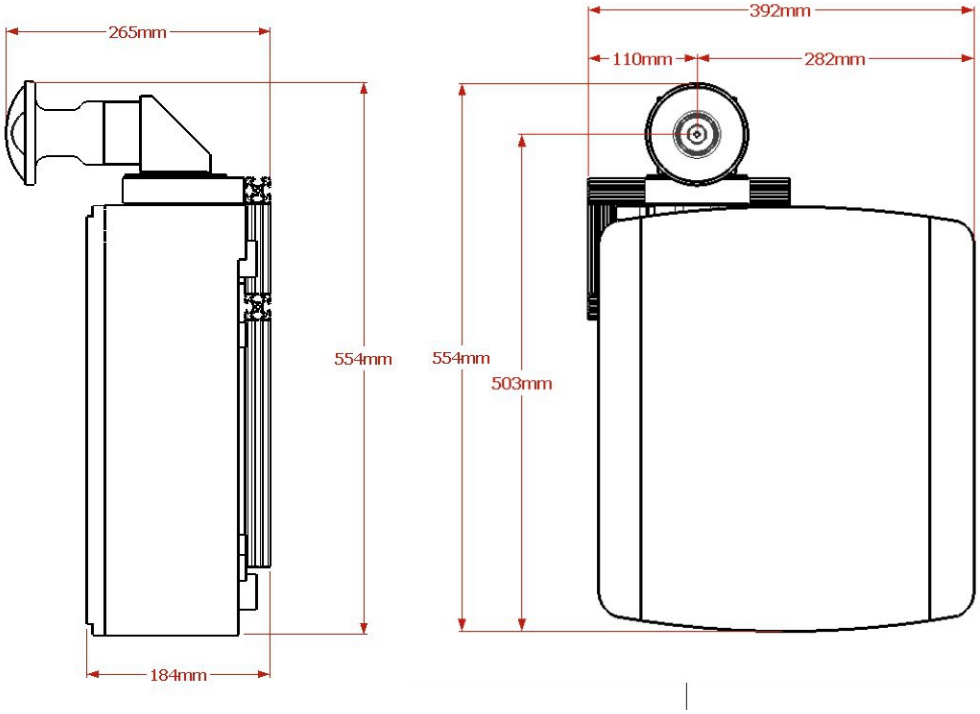


(Fig. 11) 30200 straight lens minimizes interference in traditional planetarium installations.



(Fig. 12) 30210 features a folded lens minimizing the overall fm factor.

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